

Weyerhaeuser  
3401 Industrial Way  
P.O. Box 188  
Longview, Washington 98632-7117  
Telephone: (360) 425-2150  
Fax: (360) 636-6354



## Facsimile Cover Sheet

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To: Jeff Rodin

Company: USEPA

Phone: \_\_\_\_\_

Fax: (206) 553-0124

From: Lauren Bradford

Company: Weyerhaeuser

Phone: (360) 414-3482

Fax: (360) 636-6354

Comments:

MSDS per your request.

FROM ENV. ENG office

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MANUFACTURER NAME AND ADDRESS:  
WEYERHAEUSER COMPANY  
TACOMA WA 98477  
EMERGENCY PHONE: (206) 924-5000  
ADDITIONAL INFORMATION: (206) 924-3865

**MATERIAL SAFETY DATA SHEET****RED OIL****-----1 PRODUCT IDENTIFICATION -----****PRODUCT: RED OIL****MANUFACTURING LOCATION: GRANDE PRAIRIE, ALBERTA CANADA****SYNONYMS: FOUL TURPENTINE****DATE PREPARED: 06/22/94****DATE REVISED: NAP****PREPARED BY: CORPORATE SAFETY & HEALTH****-----2 HAZARDOUS INGREDIENTS/IDENTITY INFORMATION -----**

**CHEMICAL OR  
COMMON NAME  
CAS#**

**PERCENT****EXPOSURE LIMITS**

**HYDROCARBON  
ISOMERS (C10H16)  
CAS# 8006-64-2**

**90**

**OSHA PEL-TWA 100 PPM  
ACGIH TLV-TWA 100 PPM**

**NOTE: THE HYDROCARBON ISOMERS MAY INCLUDE ALPHA AND BETA PINENE, CAMPHENE, OR OTHER TERPENES WHICH ARE TYPICAL OF PINES. THE HYDROCARBON ISOMERS ALSO INCLUDE LESS THAN 2% REDUCED SULFUR COMPOUNDS. THESE COMPOUNDS INCLUDE, BUT ARE NOT LIMITED TO, METHYL MERCAPTAN, DIMETHYL SULFIDE, AND DIMETHYL DISULFIDE.**

**APPEARANCE AND ODOR:****A RED OIL WITH THE PUNGENT SMELL OF ROTTEN EGGS.****-----3 PHYSICAL/CHEMICAL CHARACTERISTICS -----**

**BOILING POINT: 309 DEG. - 338 DEG.F(154 DEG. -170 DEG. C)**

**VAPOR PRESSURE (mm Hg): 5 AT 25 DEG. C**

**VAPOR DENSITY (AIR = 1; 1 atm): 4.8**

**SPECIFIC GRAVITY (H2O=1): 0.87**

**MELTING POINT: NAP**

EVAPORATION RATE (BUTYL ACETATE = 1): <1  
SOLUBILITY IN WATER (% BY WEIGHT): INSOLUBLE  
% VOLATILE BY VOLUME: 98

-----4 FIRE AND EXPLOSION HAZARD DATA -----

FLASH POINT (METHOD USED): 90 DEG. F-115 DEG. F (CLOSED CUP)

FLAMMABLE LIMITS:

LEL: 0.8% BY VOLUME  
UEL: N/A

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, WATER SPRAY, FOAM.

AUTOIGNITION TEMPERATURE (DEG. F OR DEG. C): 488 DEG. F (253 DEG. C)

SPECIAL FIRE FIGHTING PROCEDURES:

COOL CONTAINERS THAT ARE EXPOSED TO FLAMES WITH WATER FROM THE SIDE UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM ENDS OF TANKS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

WHEN HEATED, THE MATERIAL IS A MODERATE FIRE AND EXPLOSION HAZARD AND EMITS ACRID GASES. HOT VAPORS ARE HEAVIER THAN AIR, AND MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK.

-----5 REACTIVITY DATA -----

STABILITY:

( ) UNSTABLE (X) STABLE

CONDITIONS TO AVOID:

AVOID HEAT AND CONTACT WITH IGNITION SOURCES. THIS MATERIAL IS REASONABLY STABLE WHEN STORED IN A WELL VENTILATED, COOL PLACE IN A SUITABLE CONTAINER SEALED TO EXCLUDE AIR. IT CAN UNDERGO AUTOOXIDATION IN AIR, LIBERATING HEAT, WHICH CAN BUILD UP IN A CONFINED SPACE CAUSING SPONTANEOUS COMBUSTION.

INCOMPATIBILITY (MATERIALS TO AVOID):

THIS FLAMMABLE MATERIAL MUST BE KEPT AWAY FROM ACIDS, STRONG OXIDIZING AGENTS, OXIDATION CATALYSTS, AND SOURCES OF IGNITION AND HEAT.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

COMBUSTION WILL PRODUCE FUMES, SMOKE, CARBON DIOXIDE, SULFUR DIOXIDE, AND POSSIBLY CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

( ) MAY OCCUR (X) WILL NOT OCCUR

-----6 PRECAUTIONS FOR SAFE HANDLING AND USE -----

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SHUT OFF IGNITION SOURCES; NO FLARES, SMOKING OR FLAMES IN HAZARD AREA. STOP LEAK IF IT CAN BE DONE WITHOUT RISK. ISOLATE HAZARD AREA. WATER SPRAY MAY REDUCE VAPOR, BUT MAY NOT PREVENT IGNITION IN CLOSED SPACES. SMALL SPILL: TAKE UP WITH SAND OR OTHER NONCOMBUSTIBLE ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. LARGE SPILL: DIKE FAR AHEAD OF LIQUID SPILL FOR LATER DISPOSAL. RUNOFF TO SEWER MAY CREATE FIRE OR EXPLOSION HAZARD. NOTIFY APPROPRIATE AUTHORITIES IF RELEASED TO SEWER.

**WASTE DISPOSAL METHOD:**

BURNING IS RECOMMENDED FOR WASTE DISPOSAL, USING AN APPROVED INCINERATOR FOR APPRECIABLE AMOUNTS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE SEALED CONTAINERS.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

STORE IN A WELL SEALED CONTAINER DESIGNED FOR SOLVENTS. KEEP CONTAINER CLOSED. MATERIAL HAS A VERY STRONG, OFFENSIVE ODOR. STORE AWAY FROM OXIDIZING AGENTS IN A WELL VENTILATED, COOL AND DRY LOCATION FAR FROM SOURCES OF HEAT OR IGNITION. PROTECT CONTAINERS AGAINST PHYSICAL DAMAGE.

**OTHER PRECAUTIONS:**

AVOID INHALATION OF VAPORS OR MIST. AVOID CONTACT WITH LIQUID. DO NOT INGEST. DO NOT SMOKE IN AREAS OF STORAGE OR USE.

**-----7 HEALTH HAZARD DATA -----****PRIMARY HEALTH HAZARDS:**

FOR HOT OIL, THE PRIMARY HAZARDS MAY BE BURNS IF THE OIL IS SPLASHED ON THE SKIN OR IN EYES. INHALATION OF HOT MIST OR HOT VAPORS CAN RESULT IN BURNS TO THE RESPIRATORY TRACT. FOR COOL OIL, THE PRIMARY HAZARDS ARE DUE TO SKIN CONTACT, ACCIDENTAL INGESTION, OR INHALATION.

**PRIMARY ROUTE(S) OF EXPOSURE:**

(X) INGESTION	LIQUID
(X) SKIN	LIQUID
(X) INHALATION	MIST, VAPOR

**ACUTE HEALTH HAZARDS - SIGNS AND SYMPTOMS OF EXPOSURE/EMERGENCY AND FIRST AID PROCEDURES:****INGESTION:**

MAY CAUSE NAUSEA, HEADACHE, DIZZINESS, BREATHING DIFFICULTY, CHEST PAIN, OR DEATH (THE AVERAGE LETHAL DOSE FOR AN ADULT IS 4-6 OUNCES). DO NOT INDUCE VOMITING. GET MEDICAL HELP IMMEDIATELY.

**EYE CONTACT:**

RED OIL MAY CAUSE IRRITATION, ESPECIALLY IF HOT. HOT RED OIL CAN CAUSE CORNEAL BURNS. RED OIL VAPORS ARE IRRITATING AT HIGH CONCENTRATIONS (175 PPM). IMMEDIATELY FLUSH CONTAMINATED EYE(S) WITH RUNNING WATER FOR AT LEAST 15 MINUTES INCLUDING UNDER EYELIDS. GET MEDICAL HELP IMMEDIATELY.

**SKIN CONTACT:**

MAY CAUSE IRRITATION, DERMATITIS, OR, IF HOT, BURNS. REMOVE CONTAMINATED CLOTHING AND WASH SKIN WITH WARM WATER AND SOAP. GET MEDICAL HELP IF IRRITATION PERSISTS. LAUNDRY WORK CLOTHES BEFORE REUSE.

**SKIN ABSORPTION:**

RED OIL CAN PENETRATE THE SKIN AND CAUSE SYSTEMIC EFFECTS. WASH SKIN THOROUGHLY WITH SOAP AND WATER. RINSE THOROUGHLY. GET MEDICAL ATTENTION IF ANY SYMPTOMS PERSIST.

**INHALATION:**

THE MIST OR VAPORS ARE IRRITATING TO THE RESPIRATORY TRACT AND MAY CAUSE BREATHING DIFFICULTY, HEADACHE, DIZZINESS, NAUSEA, CHEST PAIN, BRONCHITIS, PULMONARY EDEMA, CYANOSIS, AND RAPID HEART RATE. REMOVE FROM EXPOSURE AND RESTORE BREATHING IF NECESSARY. KEEP VICTIM WARM AND GET MEDICAL HELP FOR EXCESSIVE EXPOSURE OR IF SYMPTOMS PERSIST.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:**

PREEXISTING SKIN, LIVER OR KIDNEY DISEASE. INHALATION OF MIST OR VAPOR MAY AGGRAVATE EXISTING LUNG DISEASE (e.g., ASTHMA, BRONCHITIS, EMPHYSEMA, ETC.).

**CHRONIC HEALTH HAZARDS:**

REPEATED SKIN EXPOSURE CAN RESULT IN ALLERGIC SENSITIZATION AND DERMATITIS. LONG-TERM EXPOSURE HAS REPORTEDLY RESULTED IN KIDNEY DAMAGE AND CHRONIC BRONCHITIS.

**CARCINOGENICITY LISTING:**

( ) NTP:	NOT LISTED.
( ) IARC MONOGRAPHS:	NOT LISTED.
( ) OSHA REGULATED:	NOT LISTED.

**-----8 CONTROL MEASURES -----****PERSONAL PROTECTIVE EQUIPMENT:****RESPIRATORY PROTECTION:**

CHEMICAL CARTRIDGE RESPIRATOR WITH FULL FACE MASK APPROVED FOR ORGANIC VAPOR, IF CONCENTRATIONS ARE ABOVE TLV.

**PROTECTIVE GLOVES:**

PROTECTIVE GLOVES SUCH AS NITRILE RUBBER, VITON, NEOPRENE, OR POLYVINYL ALCOHOL, SHOULD BE WORN TO PREVENT SKIN CONTACT.

**EYE PROTECTION:**

CHEMICAL SAFETY GOGGLES AND FACE SHIELD.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**

EYE WASH STATIONS AND SAFETY SHOWERS MUST BE READILY AVAILABLE.

**WORK/HYGIENIC PRACTICES:**

WASH THOROUGHLY AFTER HANDLING. EAT ONLY IN DESIGNATED LUNCH ROOM OR OTHER APPROVED AREAS.

**VENTILATION:****LOCAL EXHAUST:**

PROVIDE LOCAL EXHAUST AS NEEDED SO THAT EXPOSURE LIMITS ARE MET.

**MECHANICAL (GENERAL):**

PROVIDE GENERAL VENTILATION IN PROCESSING AND STORAGE AREAS SO THAT

**EXPOSURE LIMITS ARE MET.**

**SPECIAL:**

**SELF-CONTAINED BREATHING APPARATUS (SCBA) MUST BE AVAILABLE FOR EMERGENCY AND NON-ROUTINE SITUATIONS.**

**OTHER:**

**VENTILATE SPILL AREA. A NIOSH/MSHA-APPROVED RESPIRATOR SHOULD BE WORN IN THE ABSENCE OF ADEQUATE VENTILATION.**

**-----9 TRANSPORTATION DATA -----**

**DOT PROPER SHIPPING NAME: NOT APPLICABLE**

**HAZARD CLASS/DIVISION NUMBER:**

**ID NUMBER:**

**PACKING GROUP:**

**LABEL/PLACARD REQUIRED:**

**DOT HAZARDOUS SUBSTANCE:**

**-----10 USER'S RESPONSIBILITY -----**

**THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET IS BASED ON THE EXPERIENCE OF OCCUPATIONAL HEALTH AND SAFETY PROFESSIONALS AND COMES FROM SOURCES BELIEVED TO BE ACCURATE OR OTHERWISE TECHNICALLY CORRECT. IT IS THE USERS' RESPONSIBILITY TO DETERMINE IF THIS INFORMATION IS SUITABLE FOR THEIR APPLICATIONS AND TO FOLLOW SAFETY PRECAUTIONS AS MAY BE NECESSARY. THE USER HAS THE RESPONSIBILITY TO MAKE SURE THAT THIS SHEET IS THE MOST UP-TO-DATE ISSUE.**

**-----11 ADDITIONAL INFORMATION -----**

**DEFINITION OF COMMON TERMS:**

ACGIH	=	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
C	=	CEILING LIMIT
CAS#	=	CHEMICAL ABSTRACTS SYSTEM NUMBER
IARC	=	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
MSHA	=	MINING SAFETY AND HEALTH ADMINISTRATION
NAP	=	NOT APPLICABLE
NAV	=	NOT AVAILABLE
NIOSH	=	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
NTP	=	NATIONAL TOXICOLOGY PROGRAM
OSHA	=	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL	=	PERMISSIBLE EXPOSURE LIMIT
STEL	=	SHORT TERM EXPOSURE LIMIT (15 MINUTES)
TLV	=	THRESHOLD LIMIT VALUE
TWA	=	TIME-WEIGHTED AVERAGE (8 HOURS)

**MSDS WC220-00 06/94**

WEYERHAEUSER

